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An approach to the problem of increasing the supply of ideas for teaching disadvantaged children was considered.

A basic problem in working with disadvantaged children is that of overcoming their restricted, content-oriented language style. Working class children usually interpret things around them as simple, concrete, disconnected, isolated objects with no inter-relationship. It is the responsibility of the teacher to guide these children into an articulation or elaboration of the qualities and dimensions of a phenomenon, thereby moving them away from the concrete and into the realm of the abstract. A model process is presented which is intended to aid teachers who are seeking to increase articulation.

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Mario Fantini and Gerald Weinstein

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TOWARD A PRESCRIPTIVE THEORY FOR TEACHING THE DISADVANTAGED

by

Mario Fantini and Gerald Weinstein

Because of the present popularity of poverty and the availability of funds, making poverty financially feasible, there is now an outpouring of material aimed at identifying the problems of the poor and, to a lesser degree, identifying the cures. Teachers in urban schools who have the day-to-day responsibilities for the classrooms are now the focus of national attention. They are being told that their pupils are disadvantaged, come from deprived environments, cannot read well, are underachievers, have a culture different from the schools and, therefore, are a problem.

If they had vaguely sensed some of these things before the outpouring, at least now there is very little excuse for their not being aware of the situation. "All right", they may say, "my 'inner-city' pupils are being described in a variety of ways by a variety of people. I'm beginning to see how many of the things I am doing are inappropriate, and ineffective. I realize now how inadequate the curriculum and its materials are. Yes, I'm beginning to see all of this. But tell me, please, what I should do instead?" We ask them to attend an institute, take some courses, or read a few books. The institute might provide them with a "field experience" or "slum tour" where first hand they would feel the impact of environmental deprivation and really understand the life-style of the pupils. Or the course work in urban sociology, racial and ethnic group psychology, etc. would supply them with more formalized insights through readings and discussion. All this in the quest for "better understanding".

When, however, the moment arrives for the "understandings" to be translated into classroom practice, there is a sudden decline of activity. Certainly, there are a few vague com-

ments concerning "implications for the classroom", but these comments usually are reserved for the last session of the three month series.

We who are responsible for giving advice are in a dilemma. Certainly, we would like to be able to offer a huge repertoire of effective practices so that teachers might feel more secure in changing direction. But, frankly, we really don't know what to tell them. Naturally, we have ideas - some of which we have tried personally -- but in terms of the demand, our supply is limited.

It is the purpose of this paper to suggest a possible approach to the problem of increasing the supply of ideas for teaching the disadvantaged so that we might aid the teacher in going a few steps beyond "understanding the problem".

For many years education has attempted to utilize a diagnosis-prescription process. By diagnosis, we talked about determining, assessing, and describing the characteristics and needs of children so that we might generate practices based on that diagnosis.

As we have pointed out already, diagnoses of the disadvantaged are in high gear. There is an avalanche of description, the quality of which varies greatly. Some is more carefully documented, unified, and relevant, and it is from the best of these descriptions that we must choose if ever we are to begin offering pragmatic guidance to teachers.

Once we have decided on the descriptive theory, we must attempt to develop a process from which a prescriptive theory might evolve.

Being action-oriented, we would like to take this plunge.

In our estimation, one of the more promising and useful descriptive theories is being developed by Basil Bernstein in England. Bernstein has been focusing his attention on the socialization patterns of working class children and has indicated that a major result of this socialization style is the child who has content-oriented perceptions and verbalizations as opposed to one who possesses more structure-oriented perceptions.

Content-oriented children interpret a phenomenon as if it were a simple, concrete object, disconnected, and with no real inter-relationship or commonality. To such a child, a person, a chair, or a qualitative term such as "nice" are perceived in the same flat, single dimension - all as isolated objects. When the child is asked to verbalize about the dimensions or qualities of something, he usually responds flatly, more often with silence, or at times with hostility....to him a discussion of qualities or dimensions seems pointless.

For example, during a recent observation of a fifth-grade class of disadvantaged youngsters, we overheard a child say, "Miss X is a nice teacher", raising his voice slightly. When probed further with, "Yes, but what is a nice teacher?" the angry reply was, "Nice is nice, that's all!"

In short, "nice" was treated as a simple object by the child. The pressure to elaborate the qualities of "nice" was considered by the child to be an annoying imposition. It seems necessary, however, to point out here that all children go through a content-oriented stage. Middle class children, however, have a tendency to leave it much earlier and more easily than disadvantaged children who are prone to arrestation at the content-orientated stage. The main reason for this variance, Bernstein contends, is because of the difference in communication styles in each situation.

Working class children are socialized mainly by a restricted language style that makes

little or no use of qualitative verbalization. "Go there." "Get me that." "Shut up!" "Bring it here!" If qualitative statements are made, they are usually very flat. "He's evil!" "She's okay!" "I like it."

As a result of this style, if we believe his language use affects perceptions; the content-oriented child speaks, perceives, and thinks restrictively. Each interacts and reinforces the other so that a cycle is maintained to such an extent that any intervention that impinges on that cycle affects the child to his emotional core.

On the other hand, an orientation to structure is one in which phenomena are perceived in multi-dimensions, qualities are ennumerated, and -- most important -- inter-relationships are established.

A closely related but more comprehensive descriptive theory has been developed by David Hunt at Syracuse University. It is, in essence, a personality development theory based on "Conceptual Systems". It describes a movement pattern in four stages from the most concrete to the most abstract. Hunt's "Stage 1" person seems to coincide directly with Bernstein's description of the content-oriented child. Stage 1 is characterized by the individual who perceives the world in very absolute, concrete terms; whose experience is interpreted in an either/or fashion with very little differentiation in between. The data of the world is processed by the "Stage 1" person in terms of its boundaries, rather than in terms of a matrix.

While Hunt's Conceptual Systems theory was not developed on a social class basis, his recent experimentation with disadvantaged youngsters indicates that more of this group are found to be at Stage 1 -- and "lower" (Sub -1).

Both theories suggest a developmental continuum, i.e., restrictive code to elaborate code, content perception to structured perception, concrete to abstract. As a result of the

coinciding elements of Bernstein's and Hunt's theories, we are supplied with a descriptive tool that might serve as a lever for initiation and analysis of effective prescription.

Now that we have identified portions of our descriptive theory base (in simplified terms, of course) our next step is the initiation of practices, or prescriptions based on the description. Everyone acknowledges that some teachers are more "effective" with disadvantaged children than others. There is, of course, the reality that everyone will be using his own personal criteria for determining "effectiveness". But at this stage, we need not be concerned about that. Our first task is to identify these teachers regardless of the criteria being used. At this point, observers move in and, using their own criteria, determine which techniques are most effective. And what is the observer's criteria? It could be something very simple, but which is rooted in the descriptive theories we have mentioned. A possible effectiveness criteria question could be phrased as such: "Is there anything the teacher did that moved the pupils in any degree forward on the content-to-structure continuum?" If the answer is "yes", then we have identified an effective technique that is "descriptive relevant".

The next question we ask is, "What was it the teacher did?" What content and process was involved in causing this movement?

The product of this examination would consist of a possible prescription. Regrettably, it is at this point that too many of us would conclude our investigation. But we maintain that there is a crucial difference between a prescription and prescriptive theory. It is probably prescriptions that teachers are asking for when they say they want help. People who have come across prescriptions attempt to sell them to others as something that should be tried. While this is important, we feel that it is too limited. One of the main reasons we wish to go beyond prescriptions to prescriptive theory is that with prescriptive theory you generate

practices that are not limited to the situation in which they were conceived. Similarly, a prescriptive theory enables you to generate even more prescriptions.

In order to move then beyond mere prescription, we must approach the effective technique with the important task of analyzing its structure. Whereas our initial question was, "What did the teacher do?", our question now becomes, "Why did it work?" What were the structural elements of the process and the content beneath the surface that might have played a part in contributing to the effectiveness of the prescription? Admittedly, this is the most difficult part. There are so many things to look at from such a variety of angles that some focus is needed for the way one might approach the task. The key to such a focus might be in the descriptive theory itself. "What in the process of the technique was clearly related to the description of the child and his perceptions?" This might serve as a guideline for analysis.

The result of the analysis might be a set of hypotheses concerning the elemental patterns that emerge from the technique. Taking these elemental patterns we would attempt to generate them into a variety of teaching contexts and evaluate the results.

Thus, through analyzing, developing structural patterns, trying them in new contexts, and evaluating the results, we have initiated a process from which a prescriptive theory might emerge.

For purposes of illustration, we would first like to summarize the steps we have mentioned thus far and then examine partially a specific prescription in the light of those steps.

SUMMARY

A. Collation of the most relevant of the descriptions of disadvantaged pupils into a unified descriptive theory.

B. Identification of effective techniques or those that induce pupil movement along a descriptive theory continuum.

C. Descriptive documentation of content and process of technique.

D. Analysis of structural elements of technique. Determination of patterns relevant to descriptive theory.

E. Transfer of pattern to different contexts.

F. Evaluation, revision and re-trial.

G. Designation of time and space placement most effective for certain stages of pupil development.

Our obligation to step A has been somewhat fulfilled at the outset of this paper in the presentation of a portion of combined descriptive theory. We therefore proceed to steps B and C.

The following is an example of a documentation of a technique or prescription. We classify it as effective because of the evidence of movement on the part of the pupils' articulation from content to structure. From a very limited and undefined perception of "phoniness" pupils have begun to develop and extend the structural elements of the concept.

"Phoney Literature"

A group of 9th grade boys refused to read in English class. When asked why, they unanimously concurred that the books we were giving them were "phoney". What follows is the dialogue:

Teacher: What do you mean "phoney"?

Class: Corny.

Teacher: What does "corny" mean?

Class: (no response)

Teacher: Can you give me an example of what isn't "corny"? Say in a TV program perhaps?

Class: "Naked City".

Teacher: Why isn't "Naked City" corny or phoney?

Class: Well, one Sunday you see a kid with his mother walking to church and the next day he gets into trouble.

Teacher: Why isn't that phoney?

Class: Because he isn't all bad or all good. He isn't one-way.

Teacher: Are you saying then, that a one-way character is phoney?

Class: Yeah!

(Teacher writes "phoney" on the blackboard and under it, "one way character")

Class: If you'd give the kids in this school the choice, they'd all read comic books.

Teacher: Why?

Class: They're a lot more fun.

Teacher: But I thought you said one-way characters were "phoney"? I never heard of the Batman doing anything nasty.

Class: The big difference is we know the comic books are going to be phoney and that's why they're fun. But the stuff you give us in school you tell us isn't phoney and it always is.

Teacher: I see....what else do you see on TV that you don't think is phoney?

Class: "Divorce Court".[1]

Teacher: Why isn't that phoney?

Class: We don't know, it's just that they talk like real people. That's the thing about school books, they're not about life like we know it.

Teacher: Would you agree then that another thing that makes books phoney is the fact that the characters and events, or things that happen, aren't really believable to you?

Class: Yeah! ('Unbelievable' talk and "events" are written on the blackboard.)

Teacher: Suppose there was a science fiction story about a man traveling to Mars. Would that be phoney? (Some disagreement here by the class).

Class: It wouldn't have to be if the guy really acted like someone would act if he were really going.

Teacher: So you're saying that the situation wouldn't have to be real if the persons in it were acting in a believable way?

(Agreement)

At this point, some literary criteria -- albeit simplified --were established by the pupils: "phoniness" meant one dimensional characters, unbelievable situations and dialogue. The question remained how might we use this to carry the pupils a step further? This is what happened. The pupils were asked if they would be interested in evaluating (on their own terms) some of the new books that were sent to the school by various publishers, so that it

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[1] This is a program in which actors, to a great extent, improvise their lines.

would give the school a better idea of what might be ordered. The class agreed to try it. Soon afterwards, selections from some of the new books were read to them. It was their job to decide whether or not the selections were phoney. They attacked each book with seeming pleasure. Was the main character one-way? Was he behaving in a believable manner? These were the topics for discussion.

Pupils began to disagree with one another. Each time disagreement was expressed, they were asked to quote from a specific passage to support their opinions. Granted, their language wasn't the most sophisticated but the ideas that came forth were intriguing. It was quite possible for them now to listen to, and in some cases, to read the most mundane of school literature because they were tearing it apart.

We felt it was a good beginning.

As one approach to analysis, we will examine separately some of the statements from the preceding situation, interspersed with informal thoughts and notes regarding each question and answer:

1. Search for Pupils' Structural Perception

Question: "Why don't you want to read?" (question during introduction) Teacher seeks feedback...searches for "hidden content" or for "perception of structure"...begins with pupils' conflict...learning results from tension...release of hostility...helps them identify their "enemy".

Answer: "Phoney"

Flat, single-dimensioned answer.

Question: "What do you mean 'phoney'?"

Pushing for abstraction...an attempt to have them identify those criteria they are

using for 'phoney' to tie together or relate them to all literature...assessing their structural perception.

Answer: "Corny"

Flat synonym...again no dimension...circular definition (phoney is corny...corny is phoney)...not much better than chair is chair, nice is nice.

Question: "What does 'corny' mean?"

Attempt to determine if pupils have exhausted their abstract repertoire.

Answer: No response

Pupils and teacher clearly reach an impasse...kids want to say something, but don't know how...have only a feeling of 'phoniness'...pupils' restricted code prevents this strategy from continuing.

2. Collecting Appropriate Pupil Content

Question: "Do you know a TV program that isn't corny or phoney?"

Teacher switches strategy and media from books to TV...collects pupils "appropriate" content...gets them to use their own content to elaborate vague structure they had identified...starts with two "knowns": TV and phoney (contrast with teacher who at this point might pile on more content..."I will show you some examples" or "let's look it up in the dictionary" are statements guilty of what Bruner terms "an overload of information; this could render pupil more ineffective)...provides boundaries for response (TV program) within which pupils can achieve success...everyone can respond ...selection of boundaries depends on teacher's knowledge of child's experiences... shift from negative to positive (from "phoney" to "isn't phoney") sets contrast-tension ...forces search; makes pupils shift and reshuffle.

Answer: "Naked City."

Flat response.

Question: "Why isn't Naked City corny or phoney?"

Back to a structural question, only this time pupils' own content serves as a point of departure for elaboration... requires pupils to break down elements that are not phoney... pushes pupils to abstract an episode for an example.

Answer: "Church one day... robs the next."

Continues to respond concretely... begins to identify one element, but hasn't made clear the connection between episode and concept. It is here that many teachers might stop. When pupils gave examples, teacher might have easily made a mental jump and said, "Fine, that is an example of something that isn't phoney". Teacher might readily assume that because pupils supplied an example they understood the connection. But the crucial point is that unless the child articulates the connection he hasn't really learned anything yet! (i.e. has not moved along the elaboration continuum). It is articulation that determines whether or not the child is moving forward on the restrictive to elaborate continuum. Therefore the next question is the most significant in the sequence for this is where the learning actually begins.

3. Helping Pupils Articulate Connections

(i.e., helping pupils make connection.... relate their content to structure)

Question: "Why isn't that phoney?"

Teacher continues structural questioning... has pin-pointed specific - structure situation to force connection articulation.

Answer: "Isn't all bad or good...not one-way"

Answer represents achieved objective of questioning episode...pupils have identified a dimension of structure...first evidence of prescription effectiveness...luckily pupils produced objective. What would the next question have been if pupils had said "We don't know, its just phoney that's all". The alternative would have been "Then what would the kid have done differently if he were phoney?", making use of contrast and reshuffling to force issue again.

(Writes on board -- "One way is phoney". Reinforcement of achieved objective. Discussing what isn't phoney first criteria of what is phoney.)

One specific pattern thus far has been:

Episode #1

A. Started with pupil conflict (not wanting to read).

B. Sought structural perception child had of conflict.

C. Exhausted pupils' structural percept.

D. Encouraged pupils to contribute their content to structural percept.

E. Forced pupils to articulate connection between their content and structure.

F. Reinforced specific connection (one-way) with more of child's content (comic book -- Batman).

Episode #2

Returned to step D (above) followed same sequence with new area of child's content (Divorce Court) to come up with new connections (believable talk and believable events).

Obviously there are other patterns and insights that might be culled from the example, but we would like to stop here and briefly touch on some possible implications and extensions of the

pattern we have isolated.

Some of the questions we would raise at this time would be:

-- How might the pattern work with another content area?

-- How much of the sequence is necessary?

-- For what teaching purposes is it most suited? Most suited for concept? How related to skill development?

-- What are alternative sequences that might be effective?

-- How much of the original conflict situation is crucial? Might we use the sequence for developing the concept of say, freedom, fear, prejudice, etc.

-- Why was the sequence effective?

-- How is this programmed toward greater levels of elaboration?

It is obvious that we have only begun to scratch the surface of analysis but the main issue is the need for a beginning. Is it possible for a prescriptive process to be set in motion? Who is responsible? What are the implications for teachers, schools, and universities?

DEVELOPMENT OF A PROCESS

In the illustration "Phoney Literature," an apparently successful teaching practice with disadvantaged children was analyzed in terms of its inherent content and structure. A possible direct result of the analysis ~~was~~ could be the development of related practices. Each one retain~~s~~ed essential characteristics identified as important, and systematically formulated to be programmed either to the "left" or "right" of the original practice, depending on the relative position of the practice on the content-structure perceptual continuum. In essence, a

search process was set in motion for the study of those ingredients in successful practices which make them work with disadvantaged learners.

The formulation of the "offspring" practices necessitated a "field testing" phase, perhaps with the teacher who originated the prototype practice, but eventually with other teachers who "feed back" information concerning the trial runs.

It is our belief that inherent in the above episode are the ingredients for establishing a rational model of prescriptive development. The model is composed of teachers who assume differential roles and "instructional analysts" who work closely with these teachers in developing "field tested" practices. Most school systems contain the teachers necessary for the model. The Instructional Analyst may also be available in each school district, but more likely will be found at the college or university level.

Before elaborating on the nature of the role relationships among the individuals, it is necessary to "classify" the teachers into different role involvement levels. That is, the global classification of teachers is no longer a valid one, it seems to us. Increasingly, teacher differences are being diagnosed. Presently these differences are being viewed primarily from a <u>style</u> criterion. For example, Riessman (in approaching the question of style) speaks of "personality" types of teachers. He cites as examples "compulsive," "boomer", "Maverick", "coach", "quiet one," "entertainer", "secular" types. Although classifications such as these are helpful in viewing differences among teachers in isolation, theyreveal little about the <u>level</u> of professional performance of each teacher. In addition to style, we suggest viewing teacher divergence on a role-evolvement continuum, i. e. on the level or stage of professional socialization.

The Brentwood New York scheme is particularly relevant, we feel. This plan calls for a five-level progression in teacher classification. They are:

Level 1: Managerial Stage--Teacher mastering fundamentals of group control, is not able to implement effectively

Level 2: Material Centered Stage (Technician) -- Teacher becomes skilled at technical implementation, follows prescribed curriculum

Level 3: Innovative Stage-- Teacher uses imagination in implementation of the established curriculum; begins to utilize variation in teaching approaches

Level 4: Analytical Stage-- Teacher possesses conceptual tools for analyzing both the classroom environment and her own performance. She uses these analytic tools to rearrange the condition in the classroom environment in providing for diverse student population. Becomes a continuous student of her own teaching.

Level 5: Creative Stage-- Teacher breaks through the boundaries of present instructional and curricular framework. "Breakthroughs" in teaching approaches most likely to be found here.

Two types: 1.) Intuitive: makes leaps into unknown naturally
2.) Scientific: applies knowledge systematically to achieve new and different order of performance.

Whether there is a natural developmental sequence from level 1 to level 5 is uncertain. The question of levels of arrestment for different teachers, is another unexplored research question. Suffice to say that these levels appear to be operational and as such represent different role involvement functions for teachers. For our purpose, the classification serves to illustrate further the utilization of the various teacher roles in the development of a prescriptive technology for disadvantaged learners.

Since it is estimated that most teachers are at levels 2 and 3, Technician and Innovative Stages, it becomes important to identify a group of these teachers for research and development experiments. To focus initially and solely on the Creative teacher may not be a strategically feasible first step. We shall return to this point later.

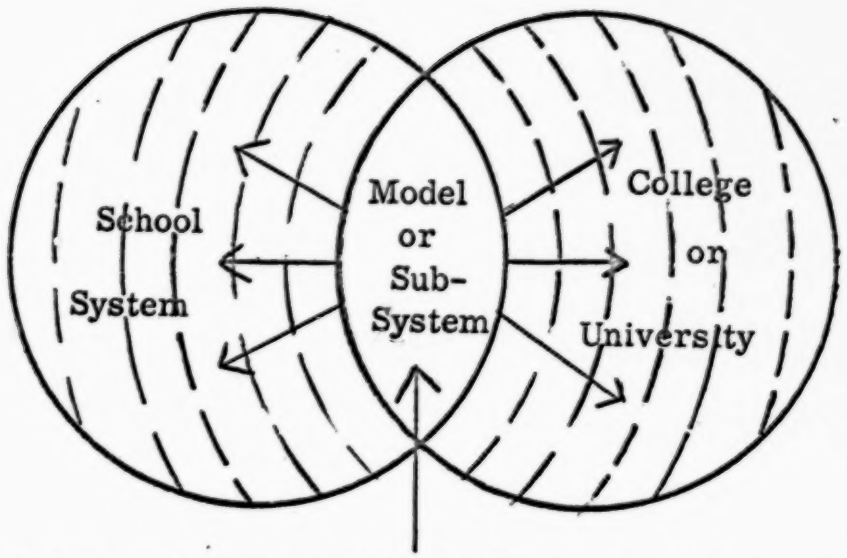
Let us assume that the Innovators are identified and that an Instructional Analyst has also been identified, either at the local public school or at the college or university near the school. The role of the Instructional Analyst is extremely significant, although it is difficult to determine if these individuals are available. If they are, the context of the new role (from college setting to school setting) may necessitate serious role redefinition. At any rate these individuals (different ones probably needed for different age group children and for different disciplines) have the responsibility for performing the basic "surgery" on the successful practices of the Innovators. They must program these into a systematic package of tested practices integrally related to descriptive theory of the disadvantaged learners.

It now becomes necessary to form a functional partnership among the Instructional Analyst, Innovator, and Technician teachers:

INITIAL TEAM

Innovator---Instructional Analyst---Technician

The system could proceed as follows: The Instructional Analyst and the Innovator teacher meet to discuss an appropriate modus operandi. The Instructional Analyst may begin by observing several Innovator teachers and by documenting successful practices, practices which reflect a part of some curriculum package. These practices are in turn processed analytically, refined and offered to Technician Material Centered teachers. If the practices pass the test with the Technicians, the Analysts may present them to other Innovator teachers who, after using the practices, may "feed back" additional variations pertinent to the programming sequence. The following model emerges:



(May be one school or group of schools in school district)

SUB-SYSTEM FEEDS OUT CURRICULUM ANALYSIS AND DEVELOPMENT TO BOTH THE COLLEGE AND THE SCHOOL SYSTEM

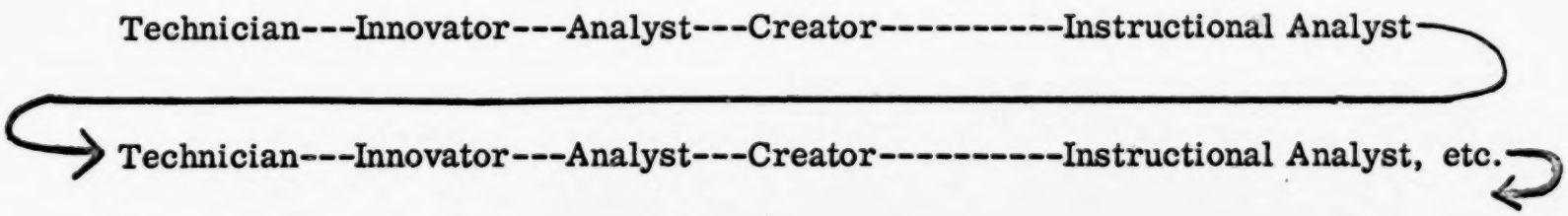
The above diagram shows first, a school and university partnership for this effort (this partnership takes on increased importance when we discuss the implication of this approach to teacher preparation). The Instructional Analyst, we are assuming, will be a college person who may have a joint appointment with the local school system. The college can assist school systems in diagnosing teacher level and in planning for appropriate pre and in-service programs for creating professional movement from Stage 1 upward in the teacher socialization scale.

The real lab for developing teaching strategies and curriculum becomes the school and the classroom. Teachers become functional agents in the development of innovation. This approach is empirical and dynamic. It starts with practice and is continuously subjected to improvement and change: the search.

However, the model thus far has been with the Innovator and Technician. What are the roles for the Creative and Analytical teachers?

The practices of the Creative teacher are also tapped, but in relation to the ones developed by the Innovators. If only those practices of the Creative teachers were processed, the chances for a gap existing between these unique practices and the ability of most teachers (Technicians and Innovators) to implement them might prove too great. The result might be to have failed to program effectively for teacher differences. If, as it has been estimated, the greatest percentage of teachers in any one school system is at the Technician level, with the second greatest percentage falling in the Innovator stage, the problem really is as much one of developing a prescriptive sequence for teachers as it is for learners. The sequence begins where teachers are, and then is programmed toward more elaboration.

The Analytical teacher might very well be brought into the team (Technician-Innovator-Instructional Analyst) during the initial team phases. His role orientation may tend to be such that he could, over time, assume the Instructional Analyst's responsibility. This requires that the college or university person serving as Instructional Analyst assumes responsibility for building in his own obsolescence, by gradually relinquishing his role to the Analytical teacher. This phase is crucial to the institutionalization of the research and development model: the search. The college Instructional Analyst is then free to move to a new setting where he can begin the cycle again. The subsequent team:



In this way the sub-system is enlarged and the feeding out of tested prescriptions to the dominant system becomes increased. Eventually the sub-system could either become stabilized and serve as the experimental lab for the overall school system, or over time, it could expand until it actually becomes the dominant system, i. e. each school develops its own search team.

We must once again underscore that implicit in this process is the assumption that the building of meaningful instructional prescription is a continuous search. Teachers of the disadvantaged can become the source of systematic knowledge about teaching restricted learners by working closely with college personnel. The false dichotomy between school teacher and college teacher cannot continue if the "search" is to be taken seriously.

IMPLICATIONS OF THE MODEL FOR CURRICULUM DEVELOPMENT

The building from pieces of successful teaching technology into a programmed package is actually another process for curriculum construction. Most practices stem from curriculum being utilized by the school system at any given time. By starting with teacher performance in the reality setting of the classroom we in essence create an almost antithetical process for curriculum development to that usually found in education. The conventional approach usually emphasizes calling together a group of teachers, supervisors, and principals who form a "curriculum committee," and conscientiously write out a curriculum guide for adoption by the school system. The guides are distributed to each teacher in the district and the task is largely completed. Curriculum flow is from the central office <u>down</u> to the teachers. Moreover the guides are more skeletal frameworks than they are specifically programmed prescriptions related to descriptive theory. Thus the curriculum guide may not

make meaningful contact with Technician and Innovator teachers who need much more structure for implementation.

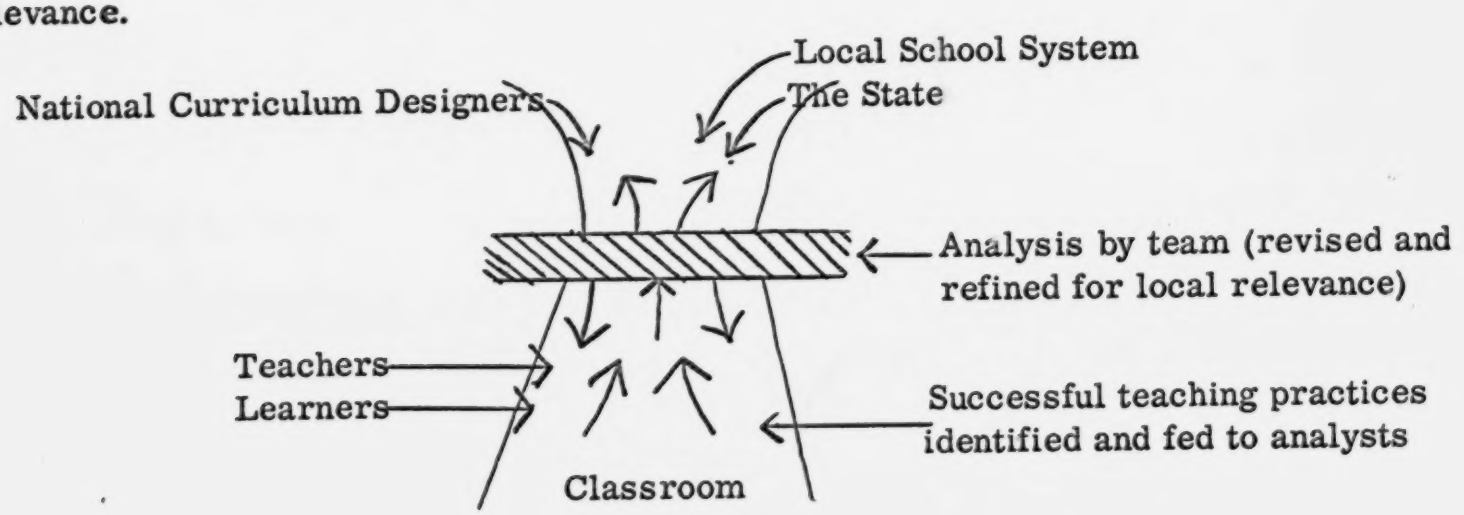
Another approach is for a group of scholars to formulate the curriculum, e.g. ESI, PSCS, BSCS, etc. The developed curriculum is then made available for implementation. This form applies more structure to both the subject matter discipline and the teacher, and will probably be more successful. However this approach also perpetuates teacher dependence by encouraging a downward curriculum flow.

The curriculum development flow is reversed through the sub-system process suggested. Teachers become the central agents in curriculum developments. More importantly, by focusing on teacher performance, curriculum development becomes much more behavioral. In essence, we begin to construct a behavioral curriculum , based on what teachers do. The process is inductive, not deductive, and can actually release the teacher to be independent. Moreover the package which emerges is much more "meaty" to the teacher for it focuses squarely on specific techniques appropriate not only for the disadvantaged learner, but for teacher performance levels.

The programmed aspect achieves yet another goal; that of synthesizing what to teach with how to teach it. A major curriculum problem has been that good curriculum is only as good as the ability of the teacher to implement it. Stated somewhat differently, new curricula have been more appropriate for Analytical and Creative teachers who are a distinct minority, and not for the majority of teachers who are at the Technical and Innovator levels. Implementation is a methodological problem. Hence, some of the current curriculur innovations are examples of beautifully and elaboratively developed conceptual systems which are dependent upon the creative teacher for implementation but are not programmed adequately

for disadvantaged learners. For example, modern math literally forces many curricula into the same "trap" by emphasizing conceptual and structural aspects of mathematics without programming adequately for restricted learners who may possess low capability for generalization and conceptualization. It also neglects the teacher who may not possess the competencies necessary for successful implementation.

Thus it appears that most of today's content curricula are appropriate as <u>starting points</u> for the search, but not as ends in themselves. We believe that any curriculum can be fed into the analytic process and will in turn be refined and redefined for local relevance.



As described above, any curriculum therefore can be fed into the sub-system and processed by the "team" so that dimensions of refinement are carefully added which could increase its effectiveness on two dimensions simultaneously:

1.) Student level - from restricted to elaborative
2.) Teacher level - from technical to creative

CURRICULUM MAKES CONTACT WITH BOTH TEACHER AND LEARNER

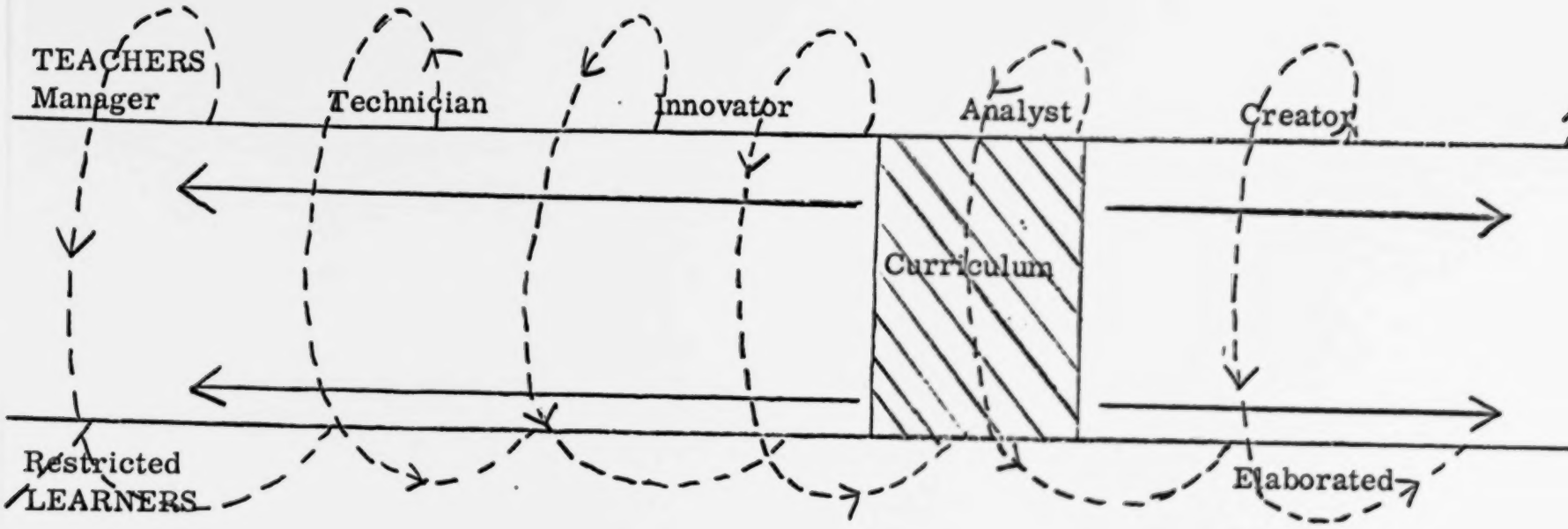


*Diagram is based on the assumption that a curriculum is not applicable for all teachers and learners. Processes must be set in motion which can program for both the teacher and the learner

The above diagram examines curriculum development from two dimensions, the differentiated role levels of teachers as well as the differential role levels of learners. A "wall to wall" curriculum cannot be advanced without appropriate progression along these dimensions.

The diagram indicates that present curricula do not extend far enough in making contact with many teachers who may be at a restricted technical level or with disadvantaged children who may be at a restricted learning level. Thus it would appear that present curricula could become more effective by more careful programming in the direction of both the Technician teacher and restricted learners. This type of programming, it appears to us, can be facilitated most realistically through the Research and Development model suggested.

NOTE: It might be interesting to note that in utilizing the content-structure analyses in relation to curriculum, we find that conventional curricula have tended to be content oriented. In essence this tended to reinforce the perceptual state of the restricted learner, while also serving to restrict the state of the elaborated learner who may be at a more advanced structural perceptual level. Newer curricular efforts have tended to be structure oriented. This has the potential of benefitting elaborate learners but poses a problem for restricted learners who have not been able to make the leap from content to structure without further programming.

One important key in making curricula relevant for a wider range of learner differences is to articulate curriculum along the content-structure continuum. In this way contact is made with each learner at his own stage of perceptual acuity, and opportunities for elaboration are fostered after point of contact. The more systematic this process is made, the greater are the possibilities for making contact with Technical and Innovator teachers. It should be emphasized that we have been talking about a system for developing more detailed functional curriculum practices, lending to the beginning of prescriptive theory. As such we are not concerned with value judgments concerning the relative merits of one curriculum over another. At this stage we only suggest that any curriculum could be fed into this "system" regardless of type.

IMPLICATIONS FOR TEACHER PREPARATION

Our review thus far also has significant implications for teacher preparation. If it is true, for example, that most practicing teachers are at the Technician (or Material Centered) level, then the teacher preparation process has not achieved its purpose. The purpose of tea-

cher preparation, it appears, is to foster teacher socialization to the Analytical and Creative stages of professional performance. Teachers in service are merely products of informal and formal forces of socialization. Let us turn momentarily to a brief examination of several of these forces.

We have emphasized the concept of role in this paper and viewed both teacher and learner in terms of role stage in a continuum of role possibilities. If both the school system and teacher preparation institution are concerned with role evolvement for both the learner and the teacher, then it would follow that if one knew how roles form and change, he could utilize this information on the question at hand. The fundamental problem appears to be one of socialization both for learner and teacher.

Just as the hidden curriculum of the disadvantaged learner is more powerful than the formal curriculum of the school, so the hidden curriculum of the teacher is more powerful than the formal curriculum of the teacher preparation institution. By this we mean that teachers have been socialized to the role of teacher primarily by being students in school settings for fifteen + years. Every prospective or practicing teacher has been exposed to a steady bombardment of behavioral teaching models as students. There is more truth in the adage, "You teach as you have been taught" than we would like to believe. This "hidden curriculum", we contend, has served as a more powerful environment for socialization than has the more formal environment created by most teacher preparation institutions.

Two forces, language and social interaction, seem to be central to role formation. Here again Bernstein's socio-linguistic theory of socialization is relevant. He believes that language as a regulator of role arises out of a social interaction context.

Thus one could conceivably alter role by altering both the teacher's professional language and context of professional social interaction. The present teacher preparation process

does this primarily by giving the teacher the professional language and analytic tools through course work at the college, and then providing opportunity for the professional social interaction practice in a school setting.

The result has been that the professional language learned may soon become irrelevant once the teacher responds to the dynamics of social interaction in the teaching situation. Other teachers, students, the principal, the curriculum, the school organization, etc. soon become the major forces which shape teacher behavior. A new and more functional language is learned on the job, and it in turn becomes the regulator of the teacher's role. Thus, the professional language learned at college which was to serve in making the teacher a continuous student of his own teaching (a searcher) cannot be internalized. Internalization is hindered because the job setting is not necessarily congruent with this language system, and does not lend itself to reinforcement.

Arrestment at the Technical or Innovator stages of professional performance may in part be a function of limited socialization impact of the "professional language first" and "practice second" model of teacher preparation. Moreover the model is largely perpetuated in graduate and in-service preparation of teachers.

What we have been leading up to is this: teacher roles are formed largely on the job. It is the job-setting that contains the dynamic forces for socialization. If teacher preparation institutions are to become more functional agents of professional socialization they must be ready to move away from the dichotomy of college for theory, school for practice. The school setting is <u>reality</u> for both theory and practice. Stated somewhat differently, if teachers are "made" on-the-job, then schools of education must become partners with local school systems in "controlling" the job setting. Unless this <u>control</u> is achieved, the real forces of

socialization will not be at the disposal of schools of education, and their function will be curtailed accordingly.

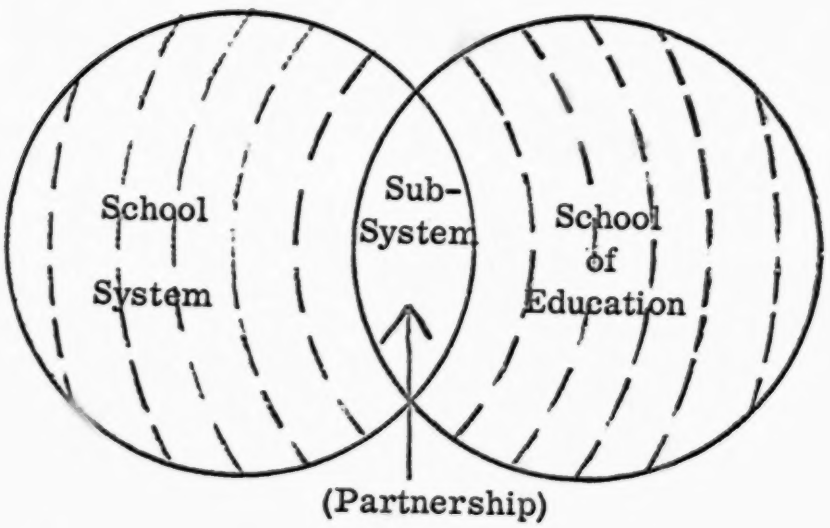
Further dichotomies such as pre and in-service training can no longer be viewed separately, but as continuous stages of socialization. If, for example, most teachers in practice are at a Technician stage, it may mean that the teacher preparation vehicle for in-service education must similarly be on the job. The progression of teachers along the professional continuum from Technical to Analytical and Creative performer cannot, it appears, be achieved for most teachers during his pre-service period of socialization. A longer period of "staging" with the teacher seems necessary. But the school system alone does not possess the resources for establishing the in-service vehicles necessary to achieve this end. The college of education does, however, possess the resources which, if joined with the local system can be a potentially powerful influencer of teacher role.

The selection and screening of candidates into teacher preparation becomes another crucial area for partnership. In light of the differential role levels of teachers, would candidates possessing certain traits be more "trainable" than others? For example, the Syracuse Urban Teacher Preparation Program is beginning to develop diagnostic measures which fall along the personal dimension of strength and sensitivity. A strong candidate can pass the test for classroom control. A sensitive candidate demonstrates awareness of student differences by capitalizing on "student feedback" in teaching. After screening, candidates are classified as:

1.) Strong-Sensitive
2.) Strong-Insensitive
3.) Weak-Sensitive
4.) Weak-Insensitive

Hypotheses such as these emerge: the strong and sensitive can be trained more rapidly to the role of Analytical or Creative teacher. The strong insensitives are more likely to be Technicians and will therefore need more doses of "sensitivity training", etc. Again, this approach has naturally built-in opportunities for tying together the college of education and the school system in a functional way.

A more symbiotic model for school and university cooperation must be attained. Presently the orientation of both are different to the degree that conflict and misunderstanding can be expected to retard most large scale partnership efforts. However, the current confrontation with the problem of educating the disadvantaged offer unusual opportunities for establishing these functional partnerships. Perhaps the sub-system approach suggested could also serve as a model for the kind of school and university partnership needed to solve the complex problems of teaching and learning not only for the school, but for the college and university as well.



SCHOOL AND UNIVERSITY PARTNERSHIP FOR JOINT ACTION

In the above chart resources of both the school of education and local school systems can be pooled and coordinated to maximize impact on teaching and learning for both institutions. The concentric circles denoting improvement move from the sub-system to both the school and university. Problems of administration, school organization, curriculum, teacher preparation, become joint concerns necessitating joint action. Unless this partnership is achieved the search for meaningful curriculum innovation for diverse learners will be seriously retarded.

SUMMARY

This paper has attempted to provide a possible framework for supplying systematic curricular prescriptions to teachers of disadvantaged children. The model is actually a process and can be utilized for all learners.

The authors claim that articulation from descriptive theory to prescriptive theory and practice does not now exist. Certain isolated practices have been found to be relevant to descriptive theory. However, no consistent means has yet been developed with which to pursue a unified set of related practices which reveals its own structure. At this point the authors suggest a process model that might provide the beginnings of a prescriptive theory of teaching and learning.

We recommend for this "search" that school systems and universities form functional partnerships, initially through the creation of a research and developmental sub-system within the larger school system. By classifying both teachers and learners into levels of performance and by analyzing "bits and pieces" of successful teaching technology, the authors contend that a self-perpetuating cycle of "curricular" improvement can be generated. This in turn, can be fed out to the larger school system and university. It has the potential for affecting

performance change of all teachers and learners. The tested practices become meaningful to both teacher and disadvantaged learner because the practices are programmed for contact with both.

The differential role notion applied to teachers and learners also has significant implications for teacher preparation and necessitates a shift in teacher socialization from the college setting to the school setting. The process suggested tends to break down dichotomies, not only in curriculum and instructional practices, but in pre and in-service education as well.

The authors state that the current problem with the disadvantaged offers strategic opportunities for commencing the functional school and university partnership through the research and development sub-system model suggested.